

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Sleep duration and quality is associated with food consumption in adolescents
AUTHORS	Min, Chanyang Kim, Hyung-Jong Park, Il-Seok Park, Bumjung Kim, Jin-Hwan Sim, Songyong Choi, Hyo Geun

VERSION 1 - REVIEW

REVIEWER	Lorenzo Tonetti
REVIEW RETURNED	03-Apr-2018

GENERAL COMMENTS	<p>Abstract</p> <p>1) Page 3, line 50. I believe that Authors should replace “than was good sleep quality” with “than good sleep quality”.</p> <p>Introduction</p> <p>1) Page 7, lines 101-103. I suggest that Authors check the following sentence for correctness: “Lee utilized KYRBWS data which is population-based datasets with containing numerous variables, she did not consider the sleep”.</p> <p>2) Page 7, lines 105-106. It seems to me that authors did not use a validated self-assessment tool of sleep quality. Some of these tools include few questions that are referred to the last week (the temporal reference of the other questions included in the Korea Youth Risk Behavior Web-based Survey), as the Mini Sleep Questionnaire (Zomer et al., 1985). I suggest that Authors discuss the lack of assessment of sleep quality through a validated questionnaire as a limit of their study.</p> <p>3) Page 7, lines 106-107. Authors wrote “We obtained reliable results for assessing the associations between sleep duration and quality, and the consumption of each of food type”. I suggest that Authors explain why they believe that their results are reliable.</p> <p>Materials and Methods</p> <p>1) Page 8, line 132. Authors should add the participation rate to the study.</p>
-------------------------	--

	<p>2) Page 8, line 133. Why did Authors exclude participants sleeping less than 3 h or more than 12 h per night? From my point of view, those participants should be included.</p> <p>3) Page 9, lines 150-152. I believe that Authors should examine the association between sleep quality and food consumption regardless of sleep duration.</p> <p>Results</p> <p>1) Page 11, lines 197-199. It seems to me that the results about being healthy and having higher parental education levels associated with shorter sleep duration are counter-intuitive.</p> <p>2) Page 14, lines 205-206. I believe that also the result on the association between higher frequency of instant noodle intake and longer sleep duration may be counter-intuitive.</p> <p>Discussion</p> <p>1) I suggest that Authors also discuss the counter-intuitive results previously highlighted.</p> <p>2) Page 22, line 241. I suggest that Authors replace “than were longer sleep durations” with “than longer sleep durations”.</p> <p>3) Page 24, lines 300-301. Authors listed as a limit of their study the lack of information on the time of eating before bed. More generally, I believe that Authors should discuss as a limit the lack of information on the timing of food intake across the 24 h, because previous studies (for a review see Garaulet and Gómez-Abellán, 2014, Physiology & Behavior) have shown its predictive role of obesity.</p> <p>4) From page 24, line 303 to page 25, line 306. From my point of view, the third is not a limit because Authors correctly avoided a possible recalling bias asking adolescents to reply thinking about the last 7 days.</p> <p>5) Page 25, lines 310-317. I suggest that Authors avoid counterbalancing the limits of the study presenting the strengths.</p>
--	--

REVIEWER	Sheila Barrett
REVIEW RETURNED	04-Apr-2018

GENERAL COMMENTS	<p>Article is timely, statistical analyses appropriate. Few changes are needed;</p> <ol style="list-style-type: none"> 1. In the discussion, too many sentences begin with “According” 2. Page 7- name the food types in the last sentence under the introduction. 3. Table 3 is disjointed; maybe landscape to see if it fits better. Also, remove excessive vertical lines form all the tables
-------------------------	---

	<p>4. Discussion- Page 22- second paragraph, name some of the health problems. Change the beginning of the sentences starting with “according”</p> <p>5. First paragraph in discussion, cite some references when you mention “in previous studies”</p> <p>6. Page 23- sentence about food and micronutrients need to be split, vitamin is not a food, it is a micronutrient so split the sentence. Paragraph is too long and run on, separate at “fast foods”</p> <p>7. Last paragraph page 23- remove “in association with sleep quality” and replace with “ and sleep” Change was to were in line 283</p> <p>8. Page 24- too many sentences beginning with According to</p> <p>9. Conclusion- Start at “ A short study.</p> <p>10. Figure 1 needs a title.</p>
--	---

VERSION 1 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name: Lorenzo Tonetti

Institution and Country: Research fellow at the Department of Psychology of the University of Bologna (Bologna, Italy).

Please state any competing interests or state 'None declared': None declared.

Please leave your comments for the authors below

Manuscript ID: bmjopen-2018-022848

Title: Sleep duration and quality is associated with food consumption in adolescents

Journal: BMJ Open

Abstract

1) Page 3, line 50. I believe that Authors should replace “than was good sleep quality” with “than good sleep quality”.

→ We changed it following your comments (See the manuscript with marked copy page 3, line 53).

Thank you.

Introduction

1) Page 7, lines 101-103. I suggest that Authors check the following sentence for correctness: “Lee utilized KYRBWS data which is population-based datasets with containing numerous variables, she did not consider the sleep”.

→ It was “she did not consider the sleep quality”. We said that the previous study did not considered the quality of sleep.

2) Page 7, lines 105-106. It seems to me that authors did not use a validated self-assessment tool of sleep quality. Some of these tools include few questions that are referred to the last week (the temporal reference of the other questions included in the Korea Youth Risk Behavior Web-based Survey), as the Mini Sleep Questionnaire (Zomer et al., 1985). I suggest that Authors discuss the lack of assessment of sleep quality through a validated questionnaire as a limit of their study.

→ We included it in the discussion(See the manuscript with marked copy page 25, line 313-314).

3) Page 7, lines 106-107. Authors wrote “We obtained reliable results for assessing the associations between sleep duration and quality, and the consumption of each of food type”. I suggest that Authors explain why they believe that their results are reliable.

→ We changed ‘reliable’ as the ‘consistent’ following the previous studies (See the manuscript with marked copy page 7, line 109-111).

Materials and Methods

1) Page 8, line 132. Authors should add the participation rate to the study.

→ We added the rates of participants (See the manuscript with marked copy page 9, line 140).

2) Page 8, line 133. Why did Authors exclude participants sleeping less than 3 h or more than 12 h per night? From my point of view, those participants should be included.

→ We excluded the outlier in that less than < 3 hours of sleep and \geq 12 hours of sleep. We think that it was not ordinal for a week, and only 145 participants (0.1%) sleep < 3 hours, and 1,038 of participants (0.7%) sleep \geq 12 hours a day.

3) Page 9, lines 150-152. I believe that Authors should examine the association between sleep quality and food consumption regardless of sleep duration.

→ As we described in supplement file (S1), sleep time was directly associated with sleep quality. Poor quality of sleep means low sleep time, and good quality of sleep mean long sleep. Therefore, if we included all of time, it is like the result of table 3. That makes no difference of the result of sleep time and food consumption. Therefore, we want to only find the association between sleep quality and food consumption. Therefore, we analyzed it confined to relatively normal sleep hours in Korean adolescent.

Results

1) Page 11, lines 197-199. It seems to me that the results about being healthy and having higher parental education levels associated with shorter sleep duration are counter-intuitive.

→ We agree with your opinion. It is counter-intuitive. However, table 1 only shows the demographics of participants. Despite we have no data on this, it might be from that high educated parents might be eager to educate their children for a longer time than others.

2) Page 14, lines 205-206. I believe that also the result on the association between higher frequency of instant noodle intake and longer sleep duration may be counter-intuitive.

→ As we stated above, table 2 only shows the basic results. This counter-intuitive disappears when we analyzed it adjusting confounders in table 3.

Discussion

1) I suggest that Authors also discuss the counter-intuitive results previously highlighted.

→ Counter-intuitive results (Table 1 and 2) disappear when we analyzed odd ratios in adjusting model (Table 3). Therefore, we did not have the importance in this study.

2) Page 22, line 241. I suggest that Authors replace “than were longer sleep durations” with “than longer sleep durations”.

→ We changed it following your comments (See the manuscript with marked copy page 22, line 245). Thank you.

3) Page 24, lines 300-301. Authors listed as a limit of their study the lack of information on the time of eating before bed. More generally, I believe that Authors should discuss as a limit the lack of information on the timing of food intake across the 24 h, because previous studies (for a review see Garaulet and Gómez-Abellán, 2014, Physiology & Behavior) have shown its predictive role of obesity.
→ We changed it following your comments (See the manuscript with marked copy page 24, line 308-309). Thank you.

4) From page 24, line 303 to page 25, line 306. From my point of view, the third is not a limit because Authors correctly avoided a possible recalling bias asking adolescents to reply thinking about the last 7 days.
→ We deleted the sentence following your comments (See the manuscript with marked copy page 25, line 311-313). Thank you.

5) Page 25, lines 310-317. I suggest that Authors avoid counterbalancing the limits of the study presenting the strengths.
→ We split the paragraph instead of counterbalancing the limits of the study presenting the strengths (See the manuscript with marked copy page 25, line 321).

Reviewer: 2

Reviewer Name: Sheila Barrett

Institution and Country: Northern Illinois University, USA

Please state any competing interests or state 'None declared': No competing interests.

Please leave your comments for the authors below

Article is timely, statistical analyses appropriate. Few changes are needed;

1. In the discussion, too many sentences begin with "According"

→ We changed it following your comments (See the manuscript with marked copy page 22, line 251, 253-255, 256). Thank you.

2. Page 7- name the food types in the last sentence under the introduction.

→ We changed it following your comments (See the manuscript with marked copy page 7, line 110-111). Thank you.

3. Table 3 is disjointed; maybe landscape to see if it fits better. Also, remove excessive vertical lines from all the tables

→ We changed the table format following your comments. Thank you.

4. Discussion- Page 22- second paragraph, name some of the health problems. Change the beginning of the sentences starting with "according"

→ We changed it following your comments (See the manuscript with marked copy page 22, line 251-253). Thank you.

5. First paragraph in discussion, cite some references when you mention "in previous studies"

→ We changed it following your comments (See the manuscript with marked copy page 22, line 248). Thank you.

6. Page 23- sentence about food and micronutrients need to be split, vitamin is not a food, it is a micronutrient so split the sentence. Paragraph is too long and run on, separate at "fast foods"

→ We split the paragraph as you suggested (See the manuscript with marked copy page 23, line 268 and 275). Thank you. We agree with your opinion that vitamin is not food. However, it is true that food contains vitamins. Because remaining sentences refer to food, energy, and nutrients are explaining the food and its components, we did not revise a sentence.

7. Last paragraph page 23- remove “in association with sleep quality” and replace with “ and sleep”
Change was to were in line 283

→ We changed it following your comments (See the manuscript with marked copy page 23, line 285; page 24, line 288). Thank you.

8. Page 24- too many sentences beginning with According to

→ We changed it following your comments (See the manuscript with marked copy page 24, line 294, 298-299). Thank you.

9. Conclusion- Start at “ A short study.

→ We changed it following your comments (See the manuscript with marked copy page 25, line 330). Thank you.

10. Figure 1 needs a title.

→ We added the title in image following your comments (the title of figure 1 is also written in the bottom of the manuscript; See the manuscript with marked copy page 34). Thank you.

VERSION 2 – REVIEW

REVIEWER	Lorenzo Tonetti
REVIEW RETURNED	27-Apr-2018

GENERAL COMMENTS	<p>Introduction</p> <p>1) Page 7, lines 104-106 of the marked manuscript. Authors should replace “Lee utilized KYRBWS data which is population-based datasets with containing numerous variables, she did not consider the sleep quality.” with “Lee utilized KYRBWS data which is population-based datasets with containing numerous variables, but she did not consider the sleep quality”.</p> <p>2) Page 7, lines 109-111 of the marked manuscript. Authors are discussing the consistency of their findings with those of previous studies. From my point of view, this sentence should be moved to the discussion.</p>
-------------------------	--

VERSION 2 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name: Lorenzo Tonetti

Institution and Country: Research fellow at the Department of Psychology of the University of Bologna (Bologna, Italy)

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

Manuscript ID: bmjopen-2018-022848.R1

Title: The association between sleep duration, quality and food consumption in adolescent: A cross-sectional study using the Korea Youth Risk Behavior Web-based Survey

Journal: BMJ Open

Introduction

1) Page 7, lines 104-106 of the marked manuscript. Authors should replace “Lee utilized KYRBWS data which is population-based datasets with containing numerous variables, she did not consider the sleep quality.” with “Lee utilized KYRBWS data which is population-based datasets with containing numerous variables, but she did not consider the sleep quality”.

→ We changed it following your comments (See the marked manuscript page 7, line 102-104). Thank you.

2) Page 7, lines 109-111 of the marked manuscript. Authors are discussing the consistency of their findings with those of previous studies. From my point of view, this sentence should be moved to the discussion.

→ We moved the contents from introduction (See the marked manuscript page 7, line 107-109) to discussion following your comments (See the marked manuscript page 22, line 246-247). Thank you.